U.S. EPA Advisory Council on Clean Air Compliance Analysis
Special Council Panel for the Review of the Third 812 Analysis
Public Meeting
November 5-6, 2003
Hilton Washington Embassy Row
2015 Massachusetts Avenue, NW
Washington, DC 20036

Purpose: (1**)** To receive an update on a draft report by the Council's the Health Effects Subcommittee (HES); (2) To review and take action on a Council Special Panel Report "Interim Installment: Review of the Revised Analytical Plan for EPA's Second Prospective Analysis - Benefits and Costs of the Clean Air Act 1990- 2020" and (3) to provide advice to the Agency on remaining charge questions related to its review of the Revised Analytical Plan for EPA's Second Prospective Analysis.

Agenda

November 5, 2003

8:30-8:35	Opening of Council Meeting	Dr. Angela Nugent, Designated Federal Officer, SAB Staff
8:35-8:40	Welcome	Dr. Vanessa Vu, Director SAB Staff Office
8:40-8:50	Review of meeting purpose, agenda, summary of Council activity to date, and summary of Remaining Charge Questions to be addressed by the Special Council Panel (Attachment A to this Agenda)	Dr. Trudy Cameron, Chair
8:50-9:00	Introduction of Members	
9:00-10:30	Background Briefings on Topics Requested by the Council Special Panel	
	- Update on Project Status and Timetable, Clarification of Key Terms	Mr. James DeMocker, EPA
	- Update on Alternative Pathway and Scenario Planning	Mr. Jim Neumann, IEc
	- Discounting Methodologies in 812 Cost and Benefit Modeling	Mr. Jim Neumann, IEc
	- Discounting and Net Present Value Concepts and EPA Analytical policies	Dr. Albert McGartland
	- Particulate Matter Expert Elicitation Pilot Project	Ms. Lisa Conner
10:30-10:45	Break	
10:45-11:15	Update on HES Draft Report, other than	Dr. Bart Ostro, Chair HES

	Charge Question 29	
11:15-11:45	Update on HES Draft Report Discussion of Charge Question 29[1]	Dr. Nino Kuenzli, Chair of HES Discussion of Charge Question 29
11:45-1:30	Working lunch Charge Question 22: Expert-judgment project on VSL determinations	Lead Discussant: Dr. James Hammitt; Associate Discussant: Dr. Trudy Cameron
	Charge Question 27: Pilot Project for estimating and reporting uncertainty in compliance cost	Lead Discussant: Dr. Virginia McConnell; Associate Discussants: Dr. Charles Kolstad, Dr. Virginia McConnell, Dr. Warner North, Dr. John Evans
1:30-2:45	Charge Question 26: General advice regarding plans for estimating and reporting uncertainty associated with the costs and benefits	Lead Discussant: Dr. Warner North; Associate Discussants: Dr. John Evans, Dr. Dale Hattis, Dr. Lester Lave
2:45-3:00	Break	
3:00-3:30	Charge Question 21: Plans for economic valuation of changes in outcomes between scenarios	Lead Discussant: Dr. Reed Johnson
3:30-5:00	Update on Council's new Ecological Effects Subcommittee. Discussion of Economic Aspects of Charge Questions Related to Ecological Effects: (Charge Question 18: Plans for analysis described in chapter 7; Charge Question 19: Ecological Case Study; and Charge Question 20, Hedonic Property Studies)	Update from SAB Staff Office Lead Discussants: Dr. Lauraine Chestnut (Charge Question 18); Dr. Reed Johnson (Charge Question 19); and Dr. Kerry Smith (Charge Question 20)
	90 minutes	
5:00-5:15	Summary of Action Items; Preparation for Next Day	Dr. Trudy Cameron
5:15	Adjourn	

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[1] Charge Question 29: Does the Council support the plans described in chapter 9 for the expert elicitation pilot project to develop a probability-based PM2.5 C-R function for premature mortality, including in particular the elicitation process design? If the Council does not support the expert elicitation pilot project, or any particular aspect of its design, are there alternative approaches the Council recommends for estimating PM-related mortality benefits for this analysis, including in particular a probabilistic distribution for the C-R function to reflect uncertainty in the overall C-R function and/or its components?

November 6, 2003

Time	Topic	Discussant
8:00-8:10	Opening of Meeting/Administrative Business	Dr. Angela Nugent
8:10-8:15	Agenda Review	Dr. Trudy Cameron
8:15-8:45	Charge Question 23: Use of VSL estimates meta-analyses	Lead Discussant: Dr. Kerry Smith; Associate Discussant: Dr. Trudy Cameron
8:45-9:15	Charge Question 31: Plans for appropriate VSL measures	Lead Discussant: Dr. James Hammitt; Associate Discussant: Dr. Kerry Smith
9:15-9:45	Charge Question 37: Application of the Kochi et al. meta-analysis and other studies to derive value of avoided premature mortality:	Lead Discussant: Dr. Trudy Cameron; Associate Discussants: Dr. James Hammitt, Dr. Kerry Smith,
9:45-10:15	Charge Question 24: Plans for QALY-based cost-effectiveness	Lead Discussant: Dr. James Hammitt, Associate Discussants: Dr. Kerry Smith, Dr. John Evans
10:15-10:30	Break	
10:30-11:00	Charge Question 25: Valuation of Morbidity Effects	Lead Discussant: Dr. Lauraine Chestnut
11:00-12:00	Discussion of any remaining issues with draft report "Interim Installment: Review of the Revised Analytical Plan for EPA's Second Prospective Analysis - Benefits and Costs of the Clean Air Act 1990-2020"	
12:00-1:30	Working Lunch Continued Discussion of draft report Discussion of Charge Question 1: Project Goals and Analytical Sequence and Identification of Points for Administrator's Cover Letter	
1:30-4:00	Continued Discussion and Council Writing Time	
4:00-4:15	Summary of Action Items	Dr. Trudy Cameron
4:15	Adjourn	

Attachment A
Charge Questions for the Special Council Panel for the Review of the Third 812
Analysis Public Meeting, November 5-6, 2003
Excerpted from the List of 37 Charge Questions (Revised as of July 3, 2003)
Provided to the Advisory Council on Clean Air Compliance Analysis

Chapter 1: Project Goals and Analytical Sequence:

1.   Does the Council support the study goals, general analytical framework, disaggregation plan, analytical sequence, and general analytical refinements defined in chapter 1? If there are particular elements of these plans which the Council does not support, are there alternatives the Council recommends?

Chapter 7: Ecological Effects

18.   Does the Council support the plans described in chapter 7 for (a) qualitative characterization of the ecological effects of Clean Air Act-related air pollutants, (b) an expanded literature review, and (c) a quantitative, ecosystem-level case study of ecological service flow benefits? If there are particular elements of these plans which the Council does not support, are there alternative data or methods the Council recommends?

19.   Initial plans described in chapter 7 reflect a preliminary EPA decision to base the ecological benefits case study on Waquoit Bay in Massachusetts. Does the Council support these plans? If the Council does not support these specific plans, are there alternative case study designs the Council recommends?

20.   Does the Council support the plan for a feasibility analysis for a hedonic property study for valuing the effects of nitrogen deposition/eutrophication effects in the Chesapeake Bay region, with the idea that these results might complement the Waquoit Bay analysis?

Chapter 8: Economic Valuation

21.   Does the Council support the plans described in chapter 8 for economic valuation of changes in outcomes between the scenarios? If there are particular elements of these plans which the Council does not support, are there alternative data or methods the Council recommends?

22.   EPA's current analytic blueprint calls for an expert-judgment project on VSL determination that would produce a probability distribution over the range of possible VSL values for use in the 812 project. EPA is not sure how much priority to give to this project. A much simpler alternative would be for EPA to specify a plausible range of VSL values. One option would be to use a range bounded by $1 million (based roughly on the lower bound of the interquartile range from the Mrozek-Taylor meta-analysis) and $10 million (based roughly on the upper bound of the interquartile range of the Viscusi- Aldy meta-analysis. This range would match that reflected in EPA's sensitivity analysis of the alternative benefit estimate for the off-road diesel rulemaking. The range would then be characterized using a normal, half-cosine, uniform or triangular distribution over that range of VSL values. EPA would then ask this Committee to review this distribution. This approach could be done relatively quickly, based on the reviews

and meta-analyses commissioned to date, and would allow a formal probability analysis to proceed, without suggesting that the Agency is trying to bring more precision to this issue than is warranted by the available science.

23.   Pursuant to SAB Council advice from the review of the first draft analytical blueprint, EPA reviewed a number of meta-analyses –either completed or underway– developed to provide estimates for the value of statistical life (VSL) to be applied in the current study. EPA plans to consult with the Council (and coordinate this consultation with the EEAC) on how best to incorporate information from the Kochi et al (2002) meta-analysis, other published meta-analyses [Mrozek and Taylor and Viscusi and Aldy], and recent published research to develop estimates of VSL for use in this study. In addition, EPA plans to implement two particular adjustments to the core VSL values: discounting of lagged effects and longitudinal adjustment to reflect changes in aggregate income. Does the Council support these plans, including the specific plans for the adjustments described in chapter 8? If the Council does not support these plans, are there alternative data or methods the Council recommends?

24.   For the 812 Report, EPA has decided to perform a cost-effectiveness analysis of the Clean Air Act provisions using quality-adjusted life years as the measure of effectiveness. This is the standard approach used in medicine and public health and this type of analysis has previously been recommended by the SAB. Moreover, the recent NAS Report (2002) on benefits analysis discussed how this method could be applied to the health gains from air pollution control.
   a.   Do you agree that QALYs are the most appropriate measure of effectiveness for this type of analysis? Would you suggest any alternative measures to replace or supplement the QALY measure? (This question relates to effectiveness measures, not monetary benefit measures as used in benefit-cost analysis).
   b.   OMB has suggested that EPA plan a workshop with clinicians, social scientists, decision analysts and economists to examine how the specific diseases and health effects in the 812 Report should be handled with respect to longevity impact and health-related preference. Participants would have knowledge of the relevant clinical conditions, the related health preference studies, and the stated-preference literature in economics. The recent RFF conference has laid the groundwork for this type of workshop. Is there a superior approach to making sure that the CEAQALY project is executed in a technically competent fashion and that the details of the work receive in-depth technical input in addition to the broad oversight provided by this Committee?
   c.   Does the Council support the specific plans for QALY-based cost-effectiveness described in the current draft blueprint? If the Council does not support specific elements of these plans, are the alternative data, methods, or results presentation approaches which the Council recommends?

25.   EPA plans to use updated unit values for a number of morbidity effects, as described in chapter 8. Of particular note, EPA plans to rely on a study by Dickie and Ulery (2002) to provide heretofore unavailable estimates of parental willingness to pay to avoid respiratory symptoms in their children. This study is not yet published and has limitations concerning response rate and sample representativeness; however, EPA expects the study to be published prior to completion of the economic valuation phase of

this analysis. Does the Council support the application of unit values from this study, contingent on its acceptance for publication in a peer-reviewed journal? If the Council does not support reliance on this study, are there other data or methods for valuation of respiratory symptoms in children which the Council recommends?

Chapter 9: Uncertainty Analysis

26.   Does the Council support the plans described in chapter 9 for estimating and reporting uncertainty associated with the benefit and cost estimates developed for this study? If there are particular elements of these plans which the Council does not support, are there alternative data, models, or methods the Council recommends?

27.   Does the Council support the plans described in chapter 9 for the pilot project to develop probability-based estimates for uncertainty in the compliance cost estimates? If the Council does not support this pilot project, or any particular aspect of its design, are there alternative approaches to quantifying uncertainty in cost estimates for this analysis which the Council recommends?

28.   Does the Council support the plans described in chapter 9 for the pilot project to develop probability-based estimates for uncertainty in the emissions and air quality modeling estimates? If the Council does not support this pilot project, or any particular aspect of its design, are there alternative approaches to quantifying uncertainty in emissions and/or air quality concentration estimates for this analysis which the Council recommends?

31.   EPA plans to work with the Council and the EEAC to develop revised guidance on appropriate VSL measures. We hope to include the Kochi et al (2002) meta-analysis, other recent meta-analysis, recent publications, and the 3 literature reviews sponsored by EPA.(a separate charge question pertaining to this element of EPA's VSL plan is presented below). In addition, EPA plans to conduct a follow-on meta-regression analysis of the existing VSL literature to provide insight into the systematic impacts of study design attributes, risk characteristics, and population attributes on the mean and variance of VSL. Does the Council support the plans described in chapter 9 for conducting this meta-regression analysis? If the Council does not support this analysis or any particular aspect of its design, are there alternative approaches which the Council recommends for quantifying the impact of study design attributes, risk characteristics, and population attributes on the mean and variance of VSL?

Appendix H: Meta-analysis of VSL
37.   Does the Council support including the Kochi et al. (2002) meta-analysis as part of a the larger data base of studies to derive an estimate for the value of avoided remature mortality attributable to air pollution? Are there additional data, models, or studies the Council recommends? Does the SAB think that EPA should include Kochi et al. 2003 if not accepted for publication in a peer reviewed journal by the time the final 812 report is completed?